

This book may be used as a text-book in High Schools and Public Schools. It would be well indeed for Canada if its use were made compulsory in every school in the land. The great truths laid before the reader are presented in a simple straightforward manner intelligible to all. The subjects are so skilfully arranged and concisely stated that a surprising amount of accurate information is given in this small octavo of 200 pages. The value of this simple knowledge to practical men is not, I believe, overstated when I aver that if all the farmers in Canada would read this little work, as they most certainly should, its appearance would mark an epoch in the history of the Dominion, which would be made manifest to all by an enormous increase in the crops and wealth of the whole country.

The scope of the work is shown by the following brief epitome of subjects : Part I. treats of the Plant, its development, structure, food and functions ; Part II., Soil, its nature and treatment ; Part III., Crops of the Field ; Part IV., The Garden, Orchard and Vineyard ; Part V., Live Stock and Dairying ; Part VI., Bees, Birds, Forests, Roads and the Home.

In these different sections the insect and fungous enemies of crops are treated at some length. This little volume is bound in cloth and well got up; although some of the illustrations are rather roughly executed, it is on the whole most excellent and for the price, 25c, is a marvel of cheapness.

THE WINTER FOOD OF THE CHICKADEE, Bulletin 54, New Hampshire College of Agriculture, by Clarence M. Weed — There is something particularly charming about those confiding little feathered denizens of the woods which brave our cold northern winters and stay to cheer us at a time of the year when there is so little animated life. The Chickadee or Black-capped Tit-mouse (*Parus atricapillus*) is at once one of the most cheerful as well as one of the most useful of our common native winter birds. What a bright, busy, happy sight is presented by a flock of these little friends ; for they are all friends these little balls of black satin and grey down, they are far too busy and well employed to waste

time in fighting. Satan has a hard time of it in "some mischief finding" for these little fellows to do, for their hands are never idle, as they hurry through the woods, running up or around the trunks of trees or hanging head downwards from a slender twig, never still for more than an instant, as they peer into every tuft of moss, every crack or cranny in the bark, along the twigs, under the bud scales of deciduous trees or among the leaves of evergreens, talking cheerfully to themselves and each other all the time as they carry out their useful mission in clearing the trees and shrubs of countless insect enemies: woe to the luckless caterpillar, chrysalis, spider, or beetle which comes within the range of their sharp black eyes. Nothing comes amiss to these insatiable hunters, from the minute, shining black eggs of an aphid to the fat chrysalis of a *Cecropia* Emperor Moth; with deft blows the hard sharp beak soon penetrates the thick silken cocoon and in a very short time the marauder is away looking for another victim. Dr. Clarence Weed publishes in this interesting bulletin the results of some careful investigations which he has carried out as to the winter food of the chickadee. He shows that more than one half of the food of this bird during the winter months consists of insects, a large proportion being in the form of eggs. Vegetation of various sorts made up a little less than a quarter of the food, and two thirds of this quarter consisted of the buds or bud scales which were believed to have been accidentally eaten along with the eggs of plant-lice. These eggs made up more than one fifth of the entire food and formed the most remarkable element of the bill of fare. This destruction of myriads of eggs of the plant-lice which infest fruit, shade and forest trees is probably the most important service which the chickadee renders during his winter residence. More than 450 of these eggs are sometimes eaten by one bird in a single day as well as the eggs of many other kinds of our most important insect enemies of the forest, garden and orchard. Dr. Weed figures in his bulletin some twigs of various trees, upon which the eggs of insects have been deposited. Among these are represented the egg masses of the tent caterpillars and the Fall

Canker-worm, both of which are favourite foods of those useful little birds. In addition to eggs of insects, many caterpillars and other stages in the development of insects are destroyed. One interesting figure shows the winter cases of a small caterpillar, closely hidden behind apple buds ; these are, in all probability, those of the Eye-spotted Bud-moth, sometimes one of the most troublesome and destructive enemies of the fruit-grower. This bulletin shows much careful work in a field which has been, to a large extent, neglected by entomologists, and Dr. Weed should receive the thanks of all lovers of birds for the proofs which he furnishes of the real benefits we receive from these little favourites. It was pleasing for some to know and most people to think that these birds were useful, but it is now possible to prove it to all who are willing to learn.—J. F.

NOTES AND REVIEWS.

NATURAL HISTORY IN NEW BRUNSWICK,—The sixteenth annual bulletin of the Natural History Society of New Brunswick has just been issued. Like its predecessors, it is full of interest to all students of the natural sciences in the Maritime Provinces. Prof. L. W. Bailey gives a sketch of Dr. James Robb, a pioneer of agricultural science. John Moser gives a list of New Brunswick mosses. S. W. Kain gives an annotated catalogue of earthquakes which have been felt in New Brunswick, and Dr. G. F. Matthew records some recent discoveries in the rocks about St. John. A good map in connection with the article shows the formations in the Kennebecasis valley about Torryburn, Rothesay, etc. Prof. W. F. Ganong has ten short notes on botanical, zoological and physiographic subjects. These are of considerable general interest. Dr. Philip Cox gives a list of New Brunswick batrachians with notes on their distribution. The appendix contains a report on the work done at a summer camp held at Quaco last summer. It consists of reports by P. G. Hall, Dr. G. F. Matthew, President G. U. Hay, and Professors Duff and



Fletcher, James. 1898. "The WInter Food of the Chickadee, by Clarence M. Weed [Review]." *The Ottawa naturalist* 12(7-8), 141–143.

View This Item Online: <https://www.biodiversitylibrary.org/item/28590>

Permalink: <https://www.biodiversitylibrary.org/partpdf/370124>

Holding Institution

MBLWHOI Library

Sponsored by

MBLWHOI Library

Copyright & Reuse

Copyright Status: NOT_IN_COPYRIGHT

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.